



# CLINICAL EXAMINATION OF PARKINSON'S DISEASE PATIENTS

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# Disclosures



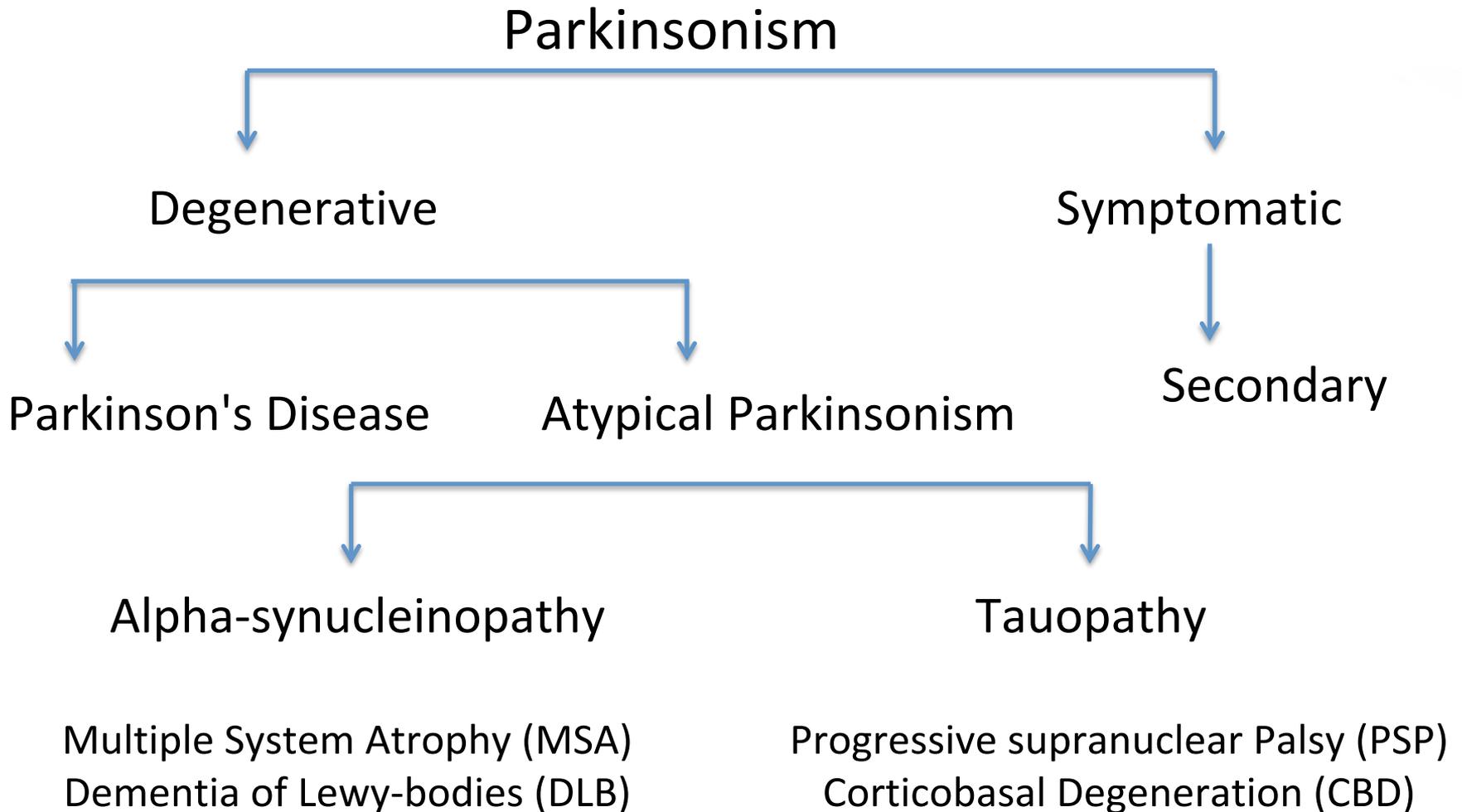
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# Learning Objectives

- Identify the phenotypic spectrum of parkinsonism
- Illustrate the clinical phenotype of Parkinson's disease
- Demonstrate clinical techniques for examining patients with Parkinson's disease
- Describe the clinical clues useful in the diagnosis of Atypical Parkinsonism

# The Etiology of Parkinsonism



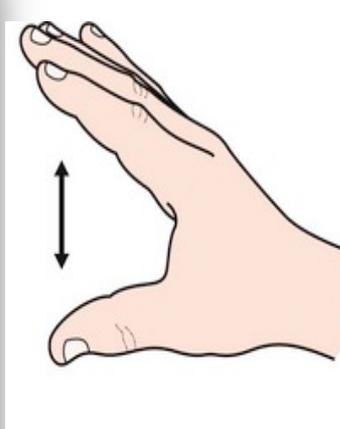
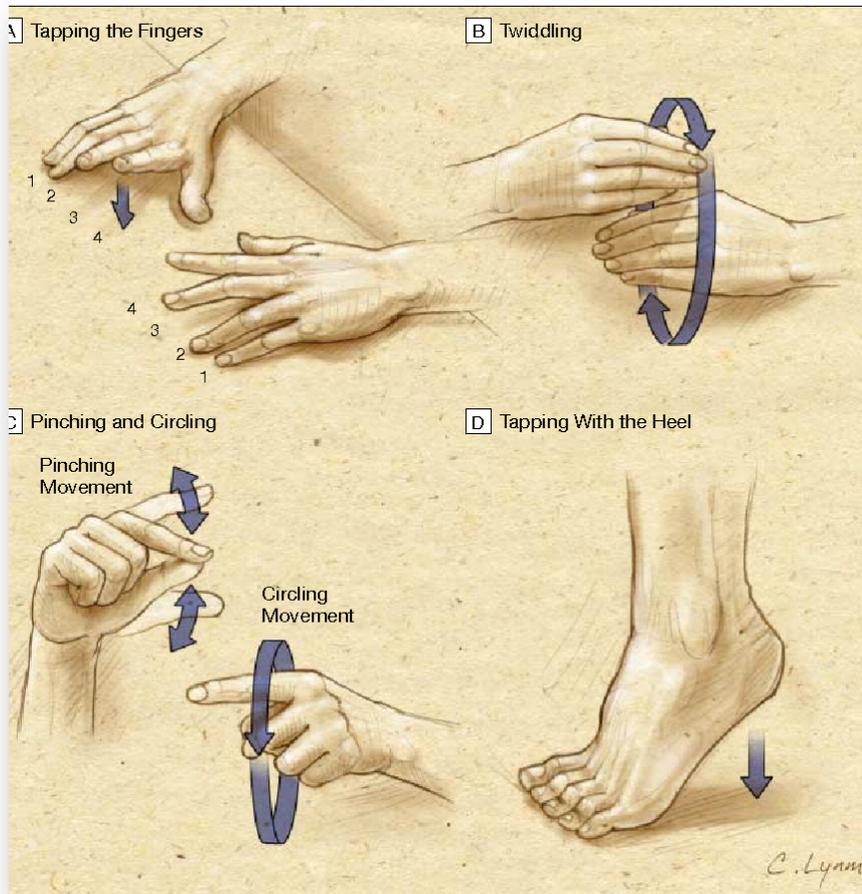
# Parkinsonism



Parkinsonism is  
a clinical  
diagnosis

- Parkinsonism remains defined as bradykinesia plus rigidity and rest tremors or both
- Bradykinesia
  - decrement in speed or amplitude is required

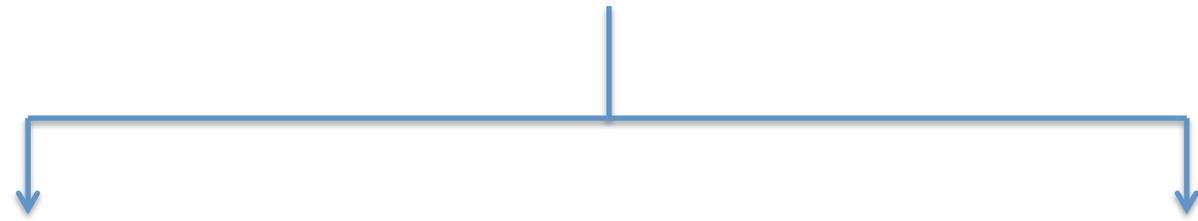
# Bradykinesia



Look for a Decrement of ( speed and amplitude)



# Tremor



## Rest Tremor



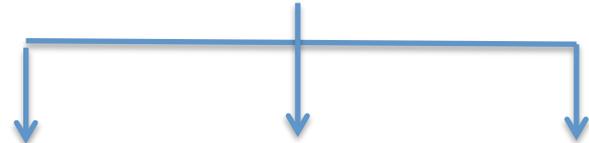
Rest **means** REST!  
1- No muscular activity  
2- No Gravity

Re- Emerging-  
Phenomenon

**Video**



## Action Tremor



Postural  
Tremor

Maintaining  
a position  
against gravity



Kinetic  
Tremor

During  
voluntary  
actions

Intention  
Tremor

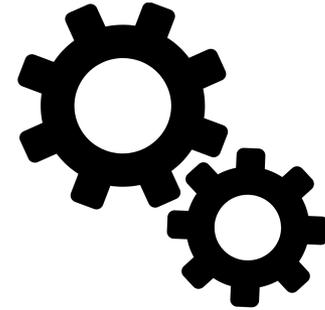
Increased  
amplitude  
when  
approaching  
goal



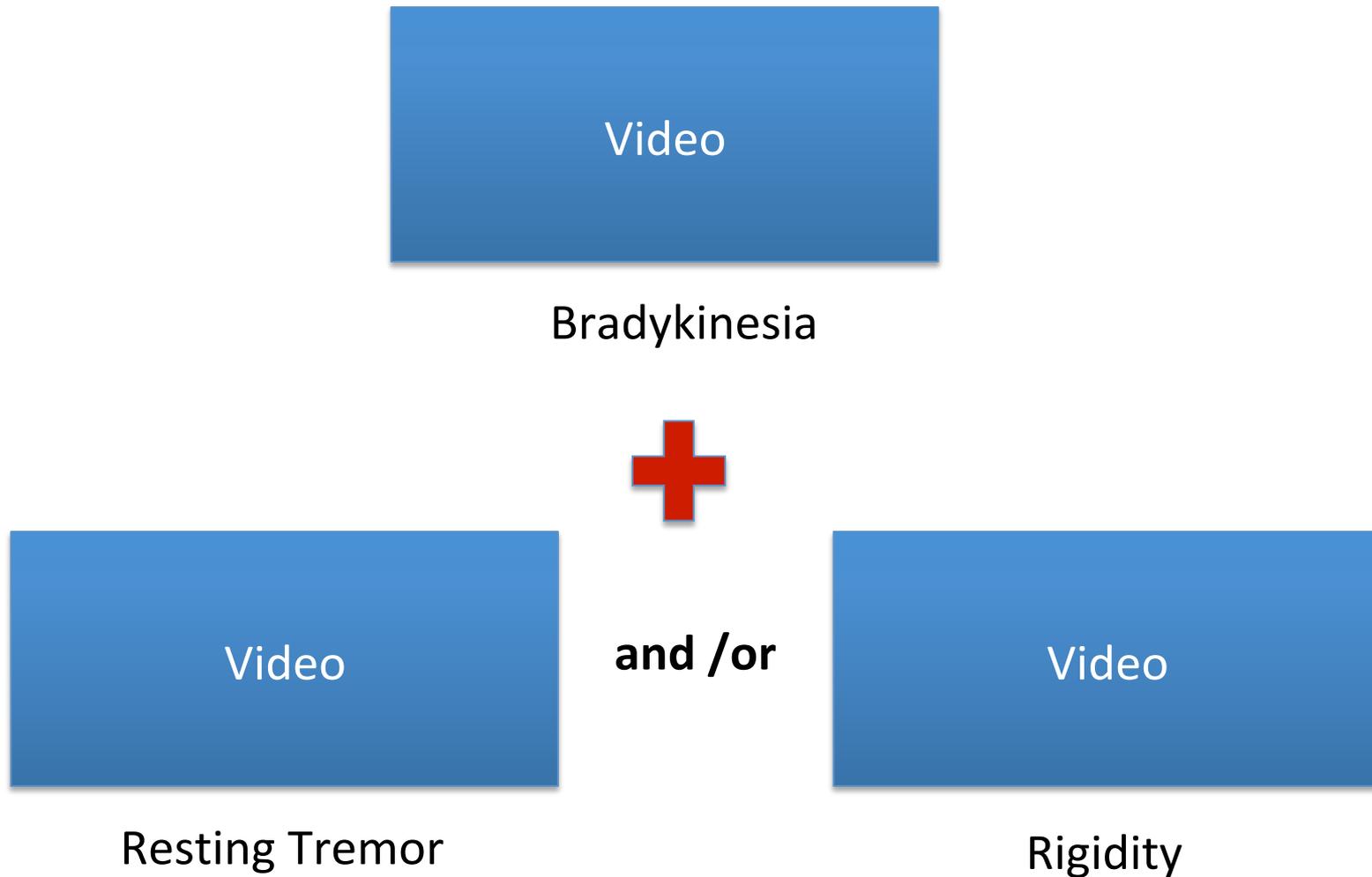


# Rigidity

- Velocity-independent hypertonia often with cogwheel phenomenon
  - Involving 2 joints
- Differential diagnosis:
  - Spasticity: velocity-dependent, flexors more involved than extensors
  - Paratonia : inconsistent , distractible  
“Gegenhalten”



# Clinical Presentation of Parkinsonism



# General Examination



The face can  
give you a  
clue

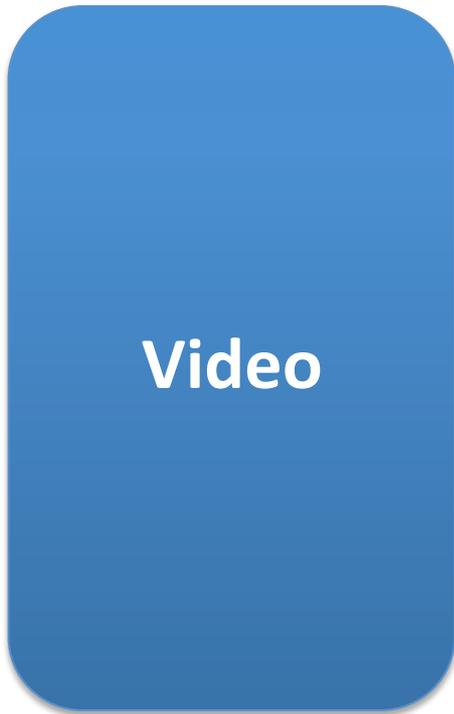
Video



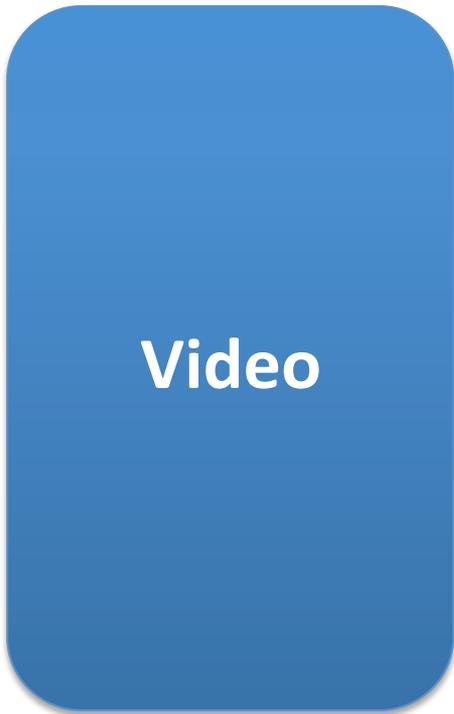
In PD-  
Face lacks expressive mobility (hypomimia)  
Reduced blinking, 2-10 per min  
Hypophonia and monotonous speech

“Procerus sign”  
Astonished look of the PSP patients

# Gait Examination



Reduced Arm swing



Festination of gait



Freezing of gait

In clinical examination, try to avoid cueing



# Axial Symptoms- Axial Dystonia

PSP



Retrocollis

MSA



Anterocollis

PD

MSA



Camptocormia



Pisa-Syndrome

# Axial Symptoms- Postural instability



**Video**

**Video**

**Video**

**Video**

Postural stability in Pull-test

Postural instability  
in Pull-test

Spontaneous Postural  
instability in Pull-test



# To Complete your examination

- Don't forget to look for:
  - Cerebellar Signs
  - Postural blood Pressure
  - Cognitive examination ( MoCA)

# Key Message



- Bradykinesia, resting tremor, rigidity and postural instability detection are the main clinical signs of Parkinson's Disease
- Clinical signs can vary during the clinical examination
- Recognizing the red flags for atypical Parkinsonism is crucial

# Thank You



## ■ References:

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